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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,734	07/28/1999	JOJI KASAI	FUR0007-US	5891

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EXAMINER

MEI, XU

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/361,734

Applicant(s)

KASAI ET AL.

Examiner

Xu Mei

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/29/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 7-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to the applicant's amendment dated 11/29/2006.

Election/Restrictions

2. This application contains claims 7-16 drawn to an invention nonelected with traverse in response mailed 15 July 2004. A complete reply to the final rejection must include cancellation of nonelected or withdrawn claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sadaie (US Patent 5,033,092).

Regarding Claim 1, Sadaie discloses an audio signal processing circuit for an audio reproduction apparatus for a listener at least having sound source located substantially at left and right sides to a listener, comprising: a phase difference control portion (2R and 2L) which receives a left channel signal (L) for the left sound source

and a right channel signal (R) for the right sound source, controls a phase difference between the left and right channel signals so as to produce a relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5), and outputs the phase difference controlled left and right channel signals for the left and right sound source (Speakers 4R and 4L), respectively. And wherein the left sound source and right sound source are positioned substantially same distances from the listener, as shown in Sadaie, a listener sitting in the middle of the back seat of the vehicle would be at substantially the same distance from the left sound source and the right sound source such that the produced relative phase difference occurs at the location of the listener (the produced relative phase difference occurs at the listener by the phase difference control portion 2R and 2L as disclosed, col. 3, lines 32-56).

Regarding Claim 2, Sadaie further discloses the phase difference control portion produces the relative phase difference of 140 degrees to 160 degrees in a frequency region ranging from 200 Hz to 1 kHz (Col. 5, lines 66-67).

Regarding Claim 3, a surround audio reproduction apparatus having a left and a right channels in front of a listener and a left and a right surround channels at left and right sides with respect to the listener, comprising; a phase difference control portion (2R and 2L) which receives a left surround channel signal (L) and a right surround channel signal (R), controls a phase difference between the left and the right surround channel signals so as to produce relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5), and outputs the phase difference controlled surround

left and right channel signals for a left and a right surround sound source (speakers 4R and 4L), respectively.

Regarding Claim 4, Sadaie further discloses the left and the right surround sound sources are a virtual sound source produced by a sound image localization processing (Col 1, lines 8-12).

Regarding Claim 5, Sadaie further discloses the phase difference control portion produces the relative phase difference of 140 degrees to 160 degrees in a frequency region ranging from 200 Hz to 1 kHz (Col. 5, lines 66-67).

Regarding Claim 6, Sadaie discloses An audio reproduction method at least utilizing sound source located substantially at left and right sides to listener, comprising the steps of: controlling a phase difference between a left channel signal (L) for the left sound source (4L) and a right channel signal (R) for the right sound source (4R) so as to produce a relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5); and outputting the phase difference controlled left and right channel signals for the left and right sound source, respectively. And wherein the left sound source and right sound source are positioned substantially same distances from the listener, as shown in Sadaie, a listener sitting in the middle of the back seat of the vehicle would be at substantially the same distance from the left sound source and the right sound source.

Regarding claims 17-19, the phase difference is controlled phase difference control portion 2R or 2L; and 2R or 2L is a monophonic (single channel signal) phase difference controller as disclosed by Sadaie.


5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Xu Mei
Primary Examiner
Art Unit 2615
02/12/2007